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(71) Applicant: LG ELECTRONICS INC (KR)

(54) Title of the Invention: METHOD FOR SHARING DATA BETWEEN  
USERS OF MOBILE COMMUNICATION TERMINALS

## **ABSTRACT**

The present invention relates to a method for sharing data between users of mobile communication terminals, which transmits an information list for data stored at each mobile communication terminal to a plurality of registered mobile communication terminals via a server at which a plurality of users of mobile communication terminals are registered; receives data from a user of a mobile communication terminal storing corresponding data according to a generated data request; and makes the data available.

To this end, the present invention comprises: a first step of registering a plurality of users of mobile communication terminals to a server capable of sharing data and providing a short message transmission service, and recording information about data stored in the mobile communication terminals in an information list of the server; a second step of transmitting

an updated information list from the server to the mobile communication terminals whenever the registered information list is updated; a third step of receiving a data request message generated through the transmitted information list, and retrieving information of a mobile communication terminal related to the requested data; and a fourth step of transmitting the data request message to the related mobile communication terminal, and transmitting the requested data in response to the transmitted data request message to a mobile communication terminal requesting the data through a short message transmission service of the server. Due to this constitution, the present invention has the effects that the users of mobile communication terminals can use the data more efficiently by sharing data, the cost burden to pay additional service fees for using new data is reduced, and communities of terminal users are formed through data sharing.

## **REPRESENTATIVE DRAWING**

FIGURE 1

## **INDEX WORDS**

mobile communication terminal, data sharing

## **SPECIFICATION**

## **BRIEF DESCRIPTION OF THE DRAWINGS**

Fig. 1 is a system configuration for sharing data between users of mobile communications terminals according to the present invention.

Fig. 2 is a drawing showing a data transfer structure including requested data which is transmitted according to the present invention.

Fig. 3 is an operational flow chart illustrating a method for sharing data between users of mobile communication terminals.

## **DESCRIPTION OF THE MAIN REFERENCE NUMBERS IN THE DRAWINGS**

100: mobile communication terminal

200: base station

300: server

## **DETAILED DESCRIPTION**

## **OBJECT OF THE INVENTION**

The present invention relates to a method for sharing data between users of mobile communication terminals, and particularly to a method for sharing data between users of mobile communication terminals, which transmits an information list for data stored at each mobile communication terminal to a plurality of registered mobile communication terminals via a server at which a plurality of users of mobile communication terminals are registered; receives data from a user of a mobile communication terminal

storing corresponding data according to a generated data request; and makes the data available.

Conventionally, the users of mobile communication terminals download multimedia-related data, such as a short message, an image and a melody, which a communications service carrier provides through the internet service, to their own terminals to use the data.

In this case, the terminal users have to download to-be-provided data from the communications service carriers whenever the data is needed.

For example, in case of a short message, a mobile communication terminal user connects to the internet site of the communications service carrier to download a short message consisting of an emoticon image or to store the short message in his/her own terminal through a message transmission service. If the user desires to send the short message to another mobile communication terminal user, he/she has to connect again to the internet site of the communications service carrier and transmit the corresponding emoticon image to the target terminal, or transmit it from his/her own terminal through the short message service.

In this transmission method, the transmission of the short message through the internet site cannot be implemented if the mobile communication terminals belong to the same communications service carrier. Also, the method for transmitting the emoticon image from his/her own terminal through the short message service is inconvenient in that the user has to input and save the same emoticon image as the stored

one.

As another example, a mobile communication terminal user connects to a wireless internet service through his/her terminal or to the internet site of the communications service carrier, and then downloads and stores an image or a melody in his/her terminal after paying a predetermined fee for the service.

Since it is difficult to transmit the stored image or melody except for the data transmission method using infrared ports between the terminals with infrared ports, the stored image or melody is used only in the terminal storing it, so that it occurs that the downloaded data are not efficiently used and deleted.

Moreover, there is a problem that since a user has to pay a predetermined amount of service fee whenever the user downloads the image or melody, if the user wants to use other images or melodies, an economical burden is imposed on the user.

Accordingly, the present invention is proposed to solve the above-described problems of the prior art. To this end, the present invention provides a data information list, which is stored in each mobile communication terminal registered to a server, to a plurality of registered mobile communication terminals and sends a resultant data request message to a mobile communication terminal including requested data to provide a corresponding data, thereby allowing users of mobile communication terminals to share data.

To achieve the above-mentioned object, the present invention comprises: a first step of registering a plurality of users of mobile communication terminals to a server capable of sharing data and providing a short message transmission service, and recording information about data stored in the mobile communication terminals in an information list of the server; a second step of transmitting an updated information list from the server to the mobile communication terminals whenever the registered information list is updated; a third step of receiving a data request message generated through the transmitted information list, and retrieving information of a mobile communication terminal related to the requested data; and a fourth step of transmitting the data request message to the related mobile communication terminal, and transmitting the requested data transmitted in response to the transmitted data request message to a mobile communication terminal requesting the data through a short message transmission service of the server.

## **CONSTITUTION AND OPERATION OF THE INVENTION**

Hereinafter, the present invention will be explained with reference to the appended drawings.

Fig. 1 shows a constitution of a system according to the present invention. As shown in Fig. 1, the present invention comprises a plurality of mobile communication terminals (100), a base station (200), and a server (300).

A mobile communication terminal (100), in which a menu transmitting a

data information list to the server (300) is added to a user interface menu, determines whether to transmit an information about data, such as a short message, an image and a melody, to the server (300) at a preset time interval or whenever new data are stored, so that the information about data is transmitted to the server (300) according to a user's selection.

In addition, if a data request message is received through a radio frequency portion of the mobile communication terminal (100), a data burst message including a corresponding data through a control portion is generated according to a terminal user's response to the received data request message, and then is transmitted to a paging channel or a traffic channel which is formed by the server (100).

The server (100) groups and registers the users of mobile communication terminals (100) connected via the base station (200), receives a data information transmitted from the mobile communication terminal (100) registered by groups and then records the data information in a data information list, and transmits the updated data information list to a corresponding group.

In this way, if a data request is generated through the transmitted data information list, an information about a terminal, in which the requested data is stored, is retrieved, a data request message is transmitted to the corresponding terminal, and then a short message is transmitted to the terminal which requested the data.

As shown in Fig. 2, the data burst message including the requested data

generated in the mobile communication terminal (100) has a message transmission structure comprising a message ID, a user data and a message center time stamp.

The user data field of the message transmission structure includes the requested data in a Chari (embedded segment) field, which comprises a header portion and a data portion.

The header portion comprises: a short message comprising only texts; a segment ID into which an ID distinguishing other multimedia is inputted; a message number into which an information for combining divided messages is inputted; and a segment number into which an information for combining divided data in one message is inputted.

The data portion comprises: a message type representing the type of multimedia to be transmitted; a message size representing the size of the message to be transmitted; information elements representing an information about a specific processing contents of a call in a call control message; and a checksum representing an information for checking data correctness.

A method for sharing data between users of mobile communication terminals according to the present invention comprises: a first step of registering a plurality of users of mobile communication terminals to a server capable of sharing data and providing a short message transmission service, and recording information about data stored in the mobile communication terminals in an information list of the server; a



second step of transmitting an updated information list from the server to the mobile communication terminals whenever the registered information list is updated; a third step of receiving a data request message generated through the transmitted information list, and retrieving information of a mobile communication terminal related to the requested data; and a fourth step of transmitting the data request message to the related mobile communication terminal, and transmitting the requested data in response to the transmitted data request message to a mobile communication terminal requesting the data through a short message transmission service of the server.

Hereinafter, one embodiment of the present invention will be explained in detail with reference to the appended drawings.

As shown in Fig. 3, if there are users of mobile communication terminals A and B, the user of each terminal accesses and registers with an internet service site to share data stored in his/her own terminal.

The registered user information is stored in a server related to a wire/wireless internet service and a short message service, and the server groups together the registered users of mobile communication terminals to allow each group of the terminal users to share specified data or to allow the desired users to share data.

In addition, the user of terminals, who is registered in a data sharing service through the server, transmits the data information stored in the terminal from a user interface function menu of the terminal to a data

information list transmission menu of the server at a preset time interval or whenever new data is stored in the terminal.

The server receives the data information, which is transmitted from the terminal at a predetermined time interval or whenever new data is stored, and records the data information in the data information list of the registered terminals. Also, whenever new data information is updated in the server at each group, the server informs a corresponding group of terminal users regarding the updated data information list through a short message.

If the user of terminal A, which identifies the data information list transmitted from the server, finds a needed data, the user of terminal A transmits a data request message, together with a data information which he/she wants to request, to the server.

The server retrieves an information about a terminal storing the requested data among the registered terminals in response to the received data request message.

If the terminal storing the requested data is terminal B as a result of the retrieval, the data request message of terminal A is transmitted to the terminal B.

If terminal B receives the data request message, a liquid crystal display of terminal B displays a message asking the user whether to respond to the data request message, together with the contents of the received data

request message.

If the user of terminal B responds to the data request message, a data burst message including the requested data is generated through a control portion of terminal B and transmitted to the server, so that the data burst message is transmitted to terminal A, which requested the data, through a short message service of the server.

In data sharing between the terminal users performed by these procedures, the terminals and the server can process the short message service differently from other messages by adding a message type bit representing a message corresponding to the data sharing system to the short message transmitted/received between the server and the registered terminals.

## **EFFECT OF THE INVENTION**

As described above, by sharing data between the terminal users, the present invention can achieve the effects that the terminal users can use the data more efficiently, the cost burden to pay additional service fees for the use of new data is reduced, and communities between the terminal users are formed through the data sharing.

## CLAIMS

What is claimed is:

1. A method of sharing data between users of mobile communication terminals, comprising:

a first step of registering a plurality of users of mobile communication terminals to a server capable of sharing data and providing a short message transmission service, and recording information about data stored in the mobile communication terminals in an information list of the server;

a second step of transmitting an updated information list from the server to the mobile communication terminals whenever the registered information list is updated;

a third step of receiving a data request message generated through the transmitted information list, and retrieving information of a mobile communication terminal related to the requested data; and

a fourth step of transmitting the data request message to the related mobile communication terminal, and transmitting the requested data transmitted in response to the transmitted data request message to a mobile communication terminal requesting the data through a short message transmission service of the server.

2. The method of sharing data between users of mobile communication terminals according to claim 1, wherein said server groups a plurality of registered mobile communication terminals and provides an updated

information list to each group.

3. The method of sharing data between users of mobile communication terminals according to claim 1, wherein said first step transmits a data information list from the terminals to the server through a data information list transmission menu in a user interface menu of said mobile communication terminals at a preset time interval or whenever new data is stored.

4. The method of sharing data between users of mobile communication terminals according to claim 1, wherein said fourth step generates a data burst message including a requested data in response to a data request message received from a related mobile communication terminal.

## DRAWINGS

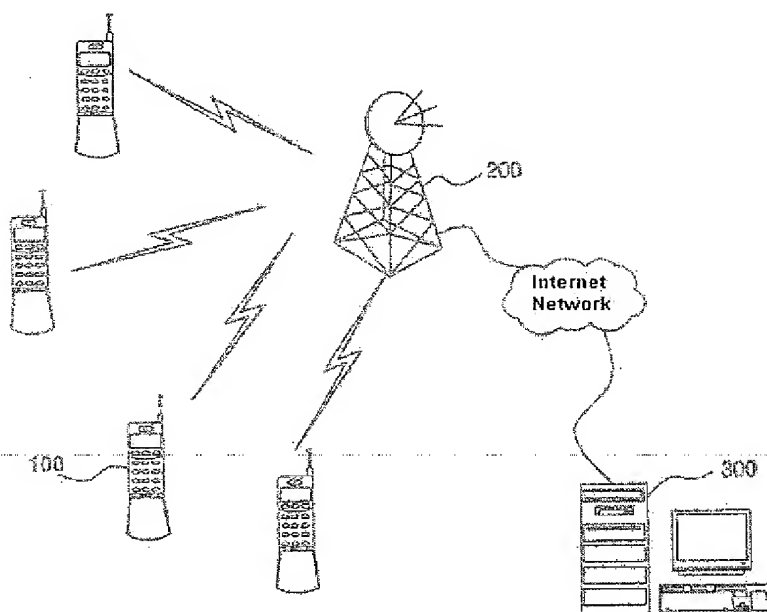


FIGURE 1

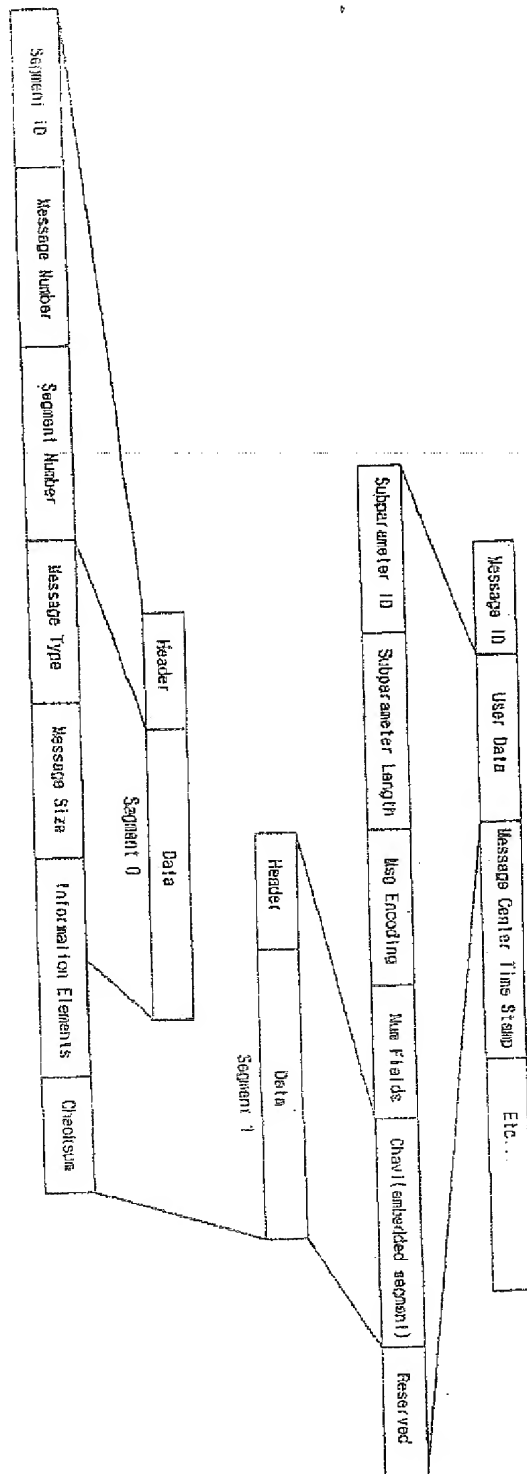


FIGURE 2

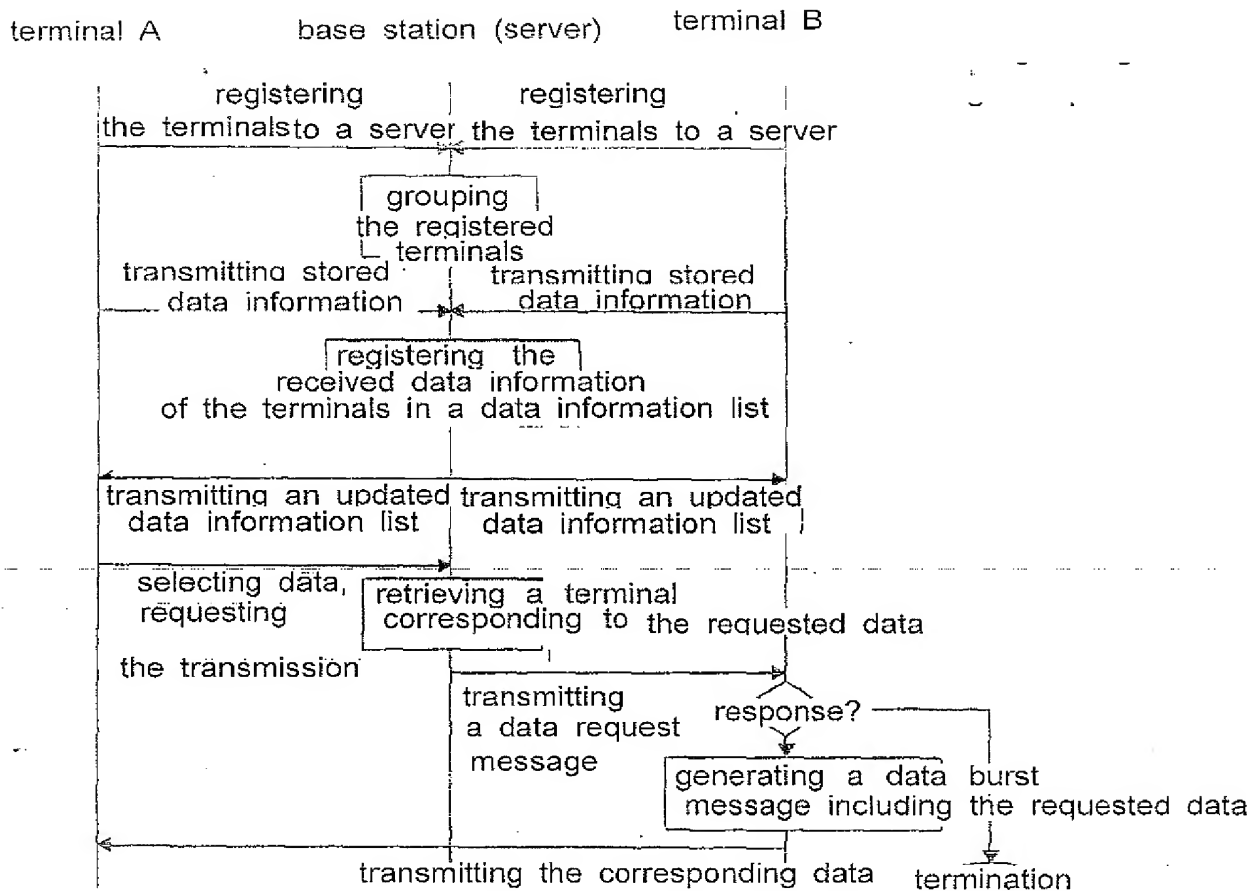


FIGURE 3